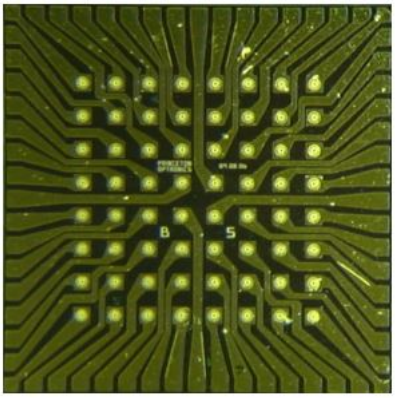
PRINCETON OPTRONICS

Addressable VCSEL Array

AA64-BC-SM-W0975



- *Vertical-Cavity Surface-Emitting Laser technology*
- *8 x 8 individually addressable array (64 channels)*
- *Vertical-Cavity Surface-Emitting Laser technology*
- *>3mW single-fundamental-mode power at 980nm*
- *High-power, multimode version also available*
- *Custom wavelengths available (808-1064nm)*
- *Custom configurations & packaging options available*

Optical & Electrical Characteristics

PARAMETER	CONDITIONS	SINGLE-MODE	MULIT-MODE	UNIT
CW Output power	I_{op}, T_{hs}	3	12	mW
Threshold current	T_{hs}	0.25	1.7	mA
Operating Current	P_{out}, T_{hs}	4	14	mA
Operating voltage	P_{out}, T_{hs}	2.2	2.5	V
Differential Resistance	P_{out}, T_{hs}	200	49	Ω
Slope efficiency	T_{hs}	0.9	1	W/A
Conversion efficiency	T_{hs}	40	45	%
Center wavelength	P_{out}, T_{hs}	975	975	nm
SMSR (1)	P_{out}, T_{hs}	-30	N/A	dB
Wavelength shift	T_{hs}	0.065	0.065	nm/°C
Beam Divergence (FW $1/e^2$)	P_{out}, T_{hs}	16	18	°
Operating Temperature		0 to +80		°C
Storage Temperature		-40 to +80		°C

(1) Side-Mode Suppression Ratio

Ordering information

AA64 - BC - SM - W0975

Package Type
BC = Bare Die
PK = Packaged Chip

Single-mode (SM) / Multi-mode (MM)

Wavelength (nm)

Princeton Optronics, Inc. ● 1 Electronics Drive ● Mercerville, New Jersey 08619
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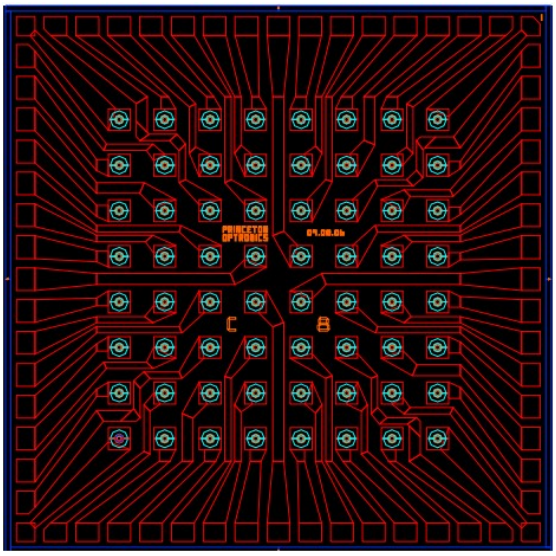
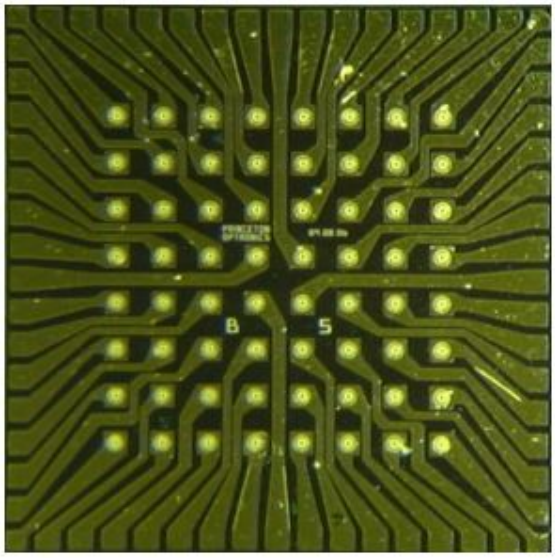
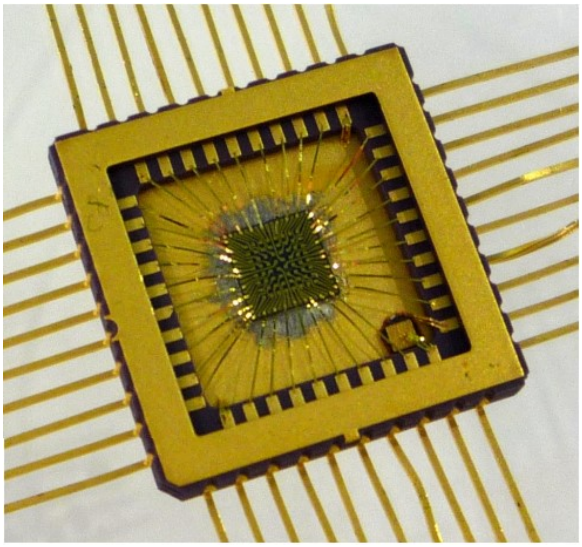
Mechanical Characteristics

3mm x 3mm chip, 64 elements on 250µm pitch





Example of a packaged chip with optional temperature sensor



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Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eye-wear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear eye protection when operating.

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